

FIG. 1

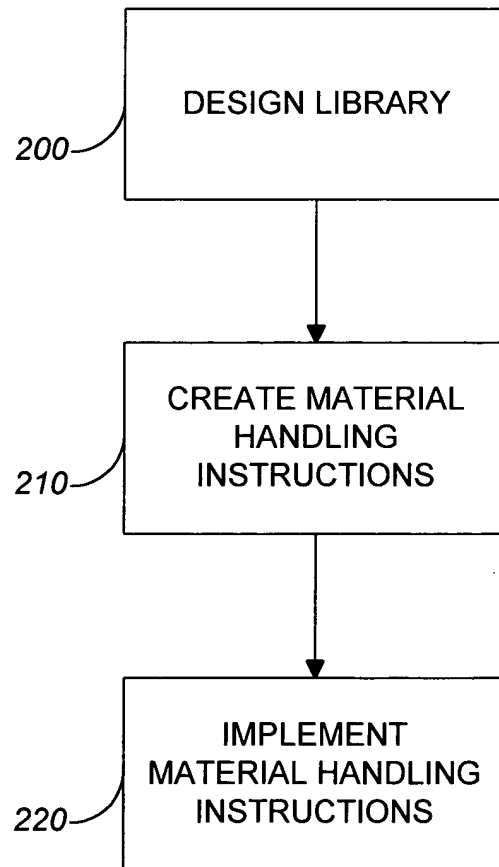


FIG. 2

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

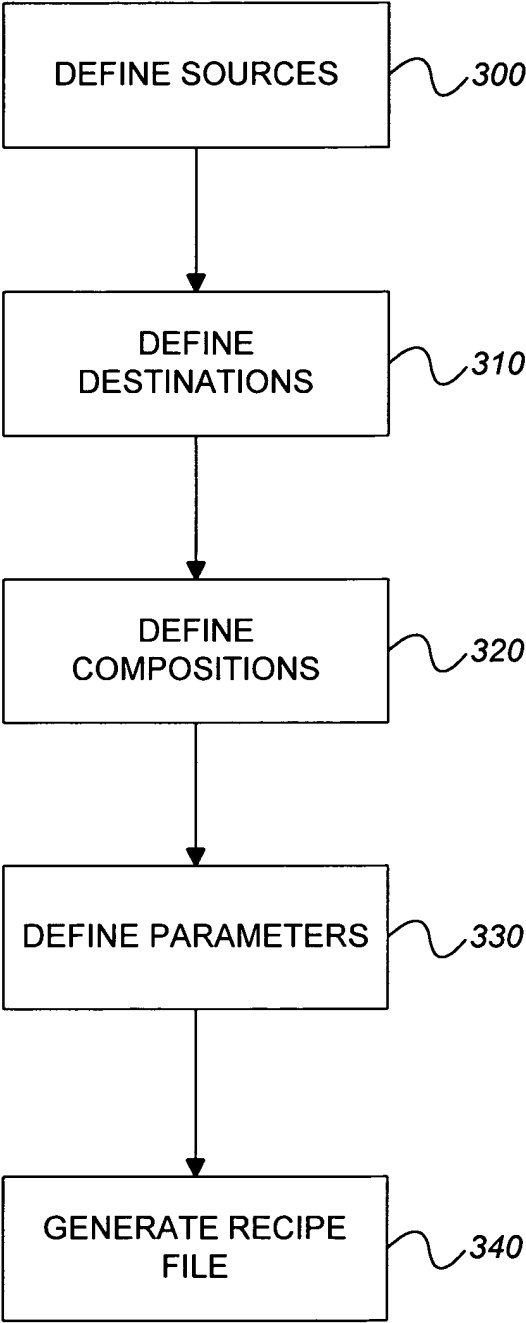


FIG. 3

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

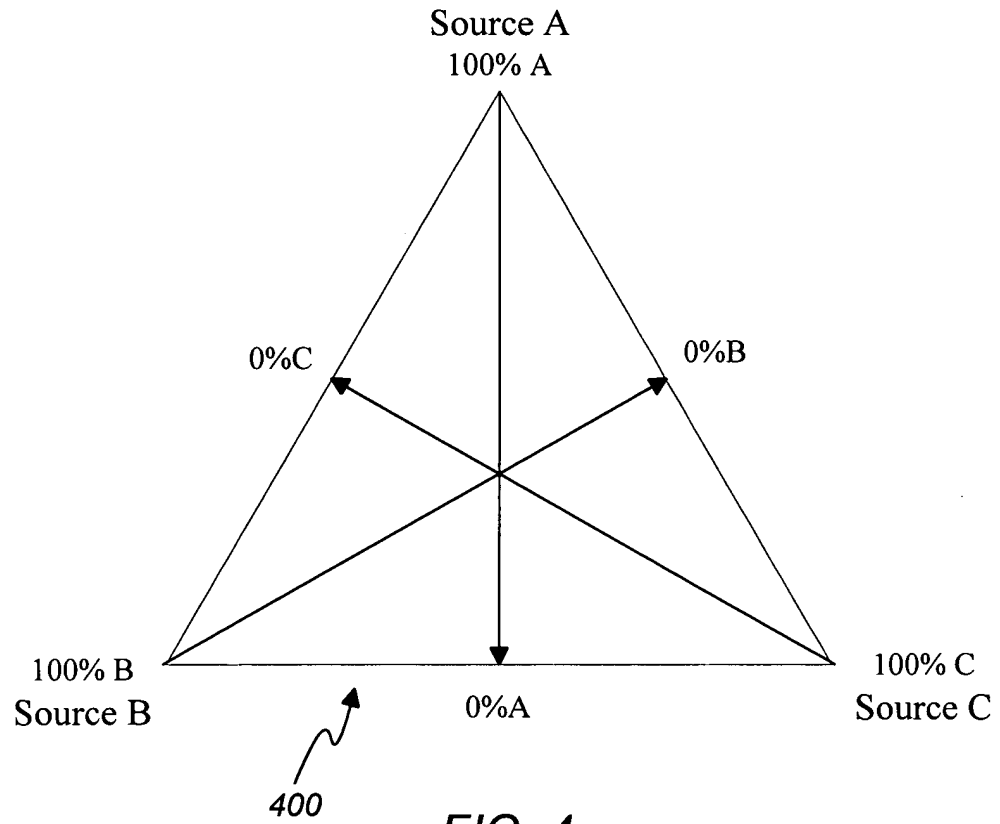


FIG. 4

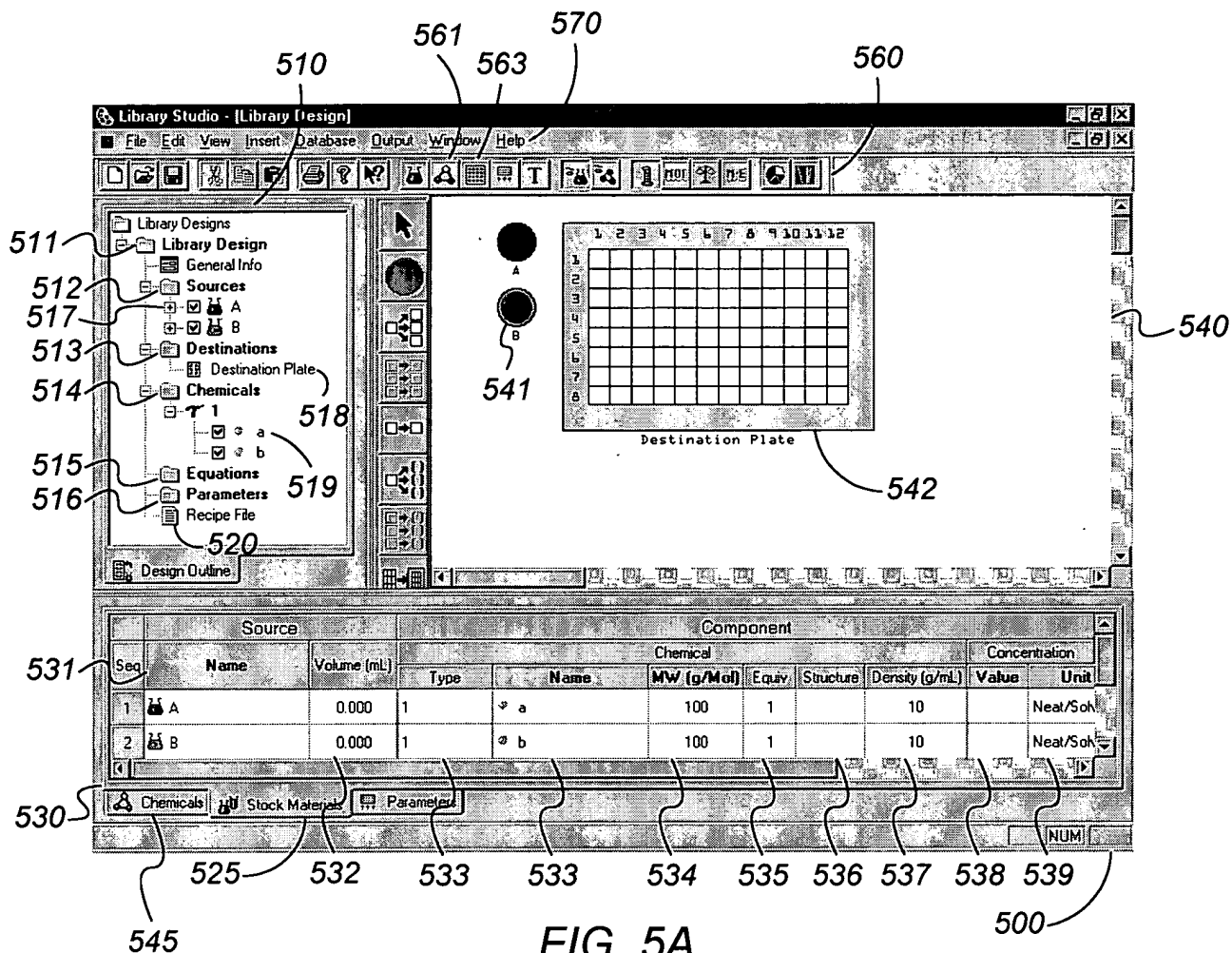


FIG. 5A

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

551 552 553 554 555 556

	Type	Chemical Name	Mol. Wt.	Equiv.	Structure	Density
1	1	a	100	1		10
2	2	b	100	1		10
3	3	c	100	1		10

545 550

Chemicals Stock Materials Parameters

FIG. 5B

580

Destination Property

Destination Name: Destination

Bounding Matrix:

Rows: 8 Columns: 12

Libraries Registered:

Add Remove

Description:

OK Cancel

FIG. 5C

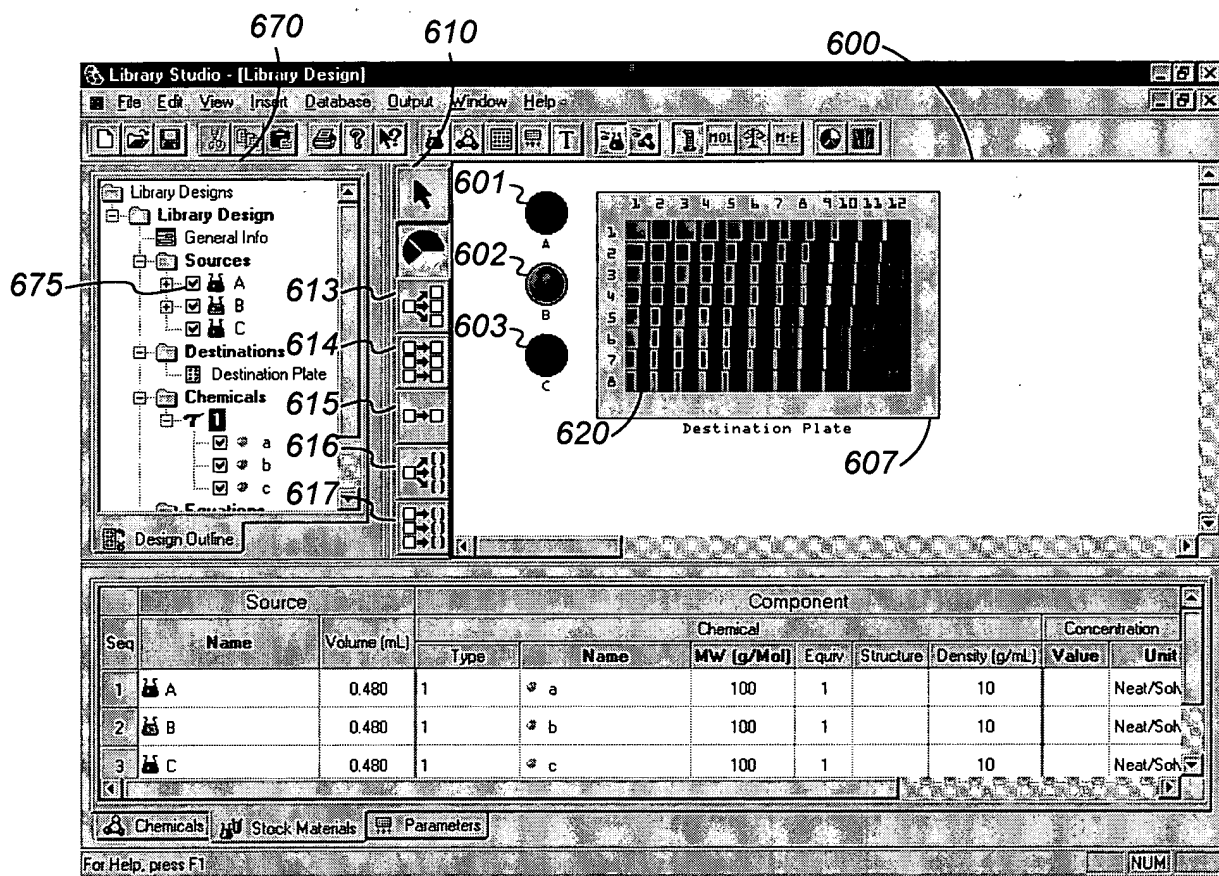


FIG. 6A

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Select Gradient Parameters

Select desired gradient shape:

☒ Rectangle
☐ Triangle 01
☐ Triangle 02
☐ Triangle 03
☐ Triangle 04

Select desired gradient orientation:

Enter gradient amounts:

Low Amount:

0

High Amount:

0

Num Rows or Cols per Step in Amount:

1

OK

Cancel

FIG. 6B

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Mapping Sequence								
Seq #	Source	Destination	Amount	To Recipe	Tag		<< Insert	
1	F (1.1),(1.1)	Plate (1.1),(7.4)	10.00 to 70.00	<input checked="" type="checkbox"/>			>> Delete	
2	E (1.1),(1.1)	Plate (1.5),(7.8)	10.00 to 70.00	<input checked="" type="checkbox"/>			Modify	
3	G (1.1),(1.1)	Plate (1.9),(7.12)	10.00 to 70.00	<input checked="" type="checkbox"/>			Replicate	
4	B (1.1),(1.1)	Plate (1.1),(2.4)	10.00 to 40.00	<input checked="" type="checkbox"/>			<div>OK</div>	
5	B (1.1),(1.1)	Plate (1.5),(2.8)	10.00 to 40.00	<input checked="" type="checkbox"/>				
6	B (1.1),(1.1)	Plate (1.9),(2.12)	10.00 to 40.00	<input checked="" type="checkbox"/>				
7	C (1.1),(1.1)	Plate (5.1),(6.4)	10.00 to 40.00	<input checked="" type="checkbox"/>				
8	C (1.1),(1.1)	Plate (5.5),(6.8)	10.00 to 40.00	<input checked="" type="checkbox"/>				
9	C (1.1),(1.1)	Plate (5.9),(6.12)	10.00 to 40.00	<input checked="" type="checkbox"/>				
10	B (1.1),(1.1)	Plate (8.1),(8.2)	70.00 to 70.00	<input checked="" type="checkbox"/>				
11	C (1.1),(1.1)	Plate (8.9),(8.10)	70.00 to 70.00	<input checked="" type="checkbox"/>				
12	H (1.1),(1.1)	Plate (1.1),(8.12)	500.00 to 500.00	<input checked="" type="checkbox"/>				
13	A (1.1),(1.1)	Plate (3.1),(4.4)	10.00 to 40.00	<input checked="" type="checkbox"/>				

660

FIG. 6C

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

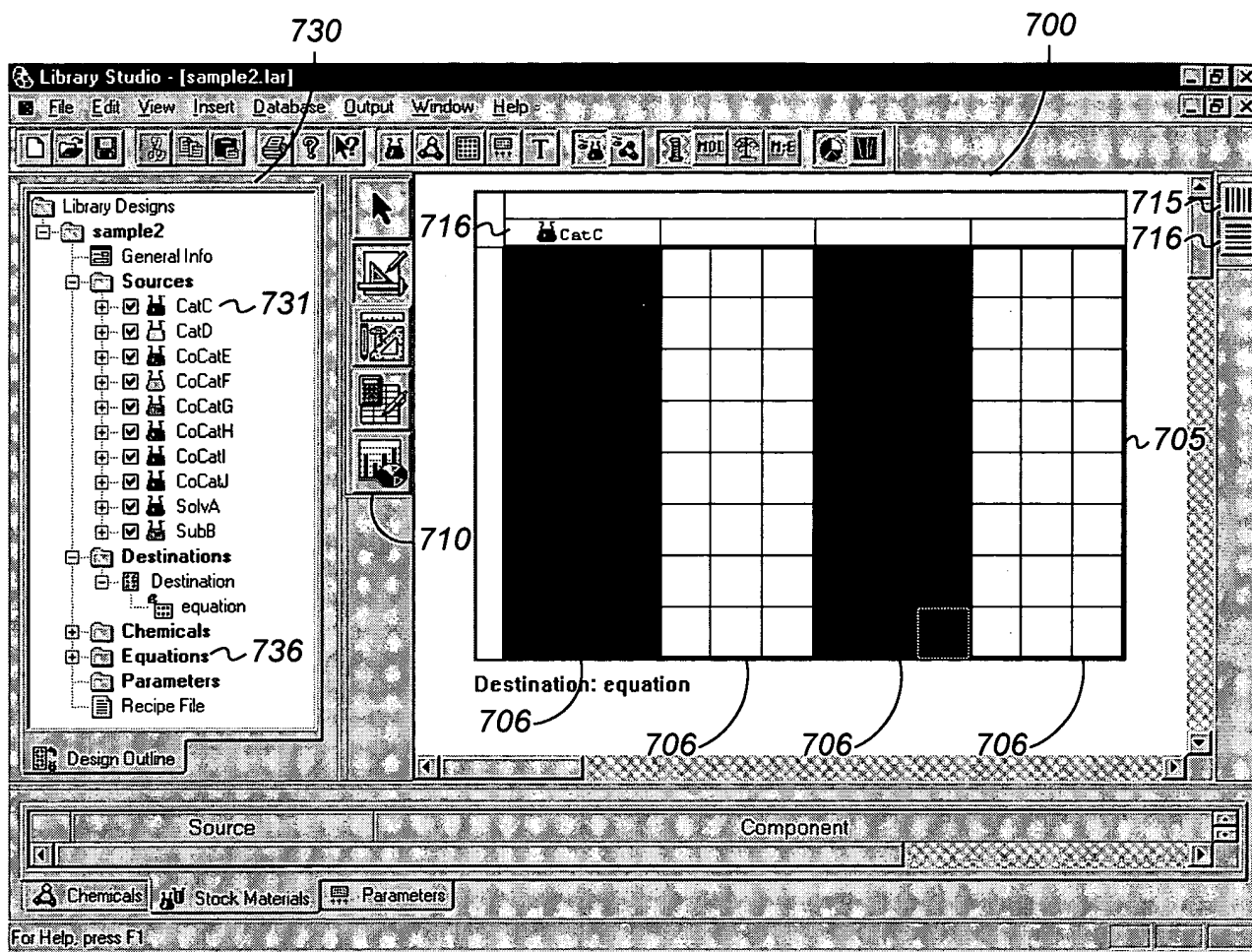


FIG. 7A

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

755

Equation 2

Equation Unit

Mole*Equiv.

☐ Use coefficient functions

Equation

Item		Coef.		Item	
CoCatalyst	=	0.1	x	Catalyst	<input checked="" type="checkbox"/>
	+		x		<input type="checkbox"/>

752

754

752

Coefficient Function

Function

Direction

Start At

☐ Top Left

☐ Top Right

☒ Bottom Left

☐ Bottom Right

756

OK

Cancel

FIG. 7B

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAWN		

Equation 2

Equation Unit

Mole*Equiv.

760

☒ Use coefficient functions

Equation

Item		Coef.				Item	...
		From	To	Step Width			
CoCatalyst	=	0.1	10	1	x	Catalyst	<input checked="" type="checkbox"/>
	+				x		<input type="checkbox"/>

762

763

764

765

762

769

Coefficient Function

Function

Linear

767

Direction

Horizontal

768

Start At

☒ Top Left

☐ Top Right

☐ Bottom Left

☐ Bottom Right

770

OK

Cancel

FIG. 7C

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DATE		

805

Library Studio - [sample.lar]

File Edit View Insert Database Output Window Help

sample

General Info

Sources

- ☒ CatC
- ☒ CatD
- ☒ CoCatE
- ☒ CoCatF
- ☒ CoCatG
- ☒ CoCatH
- ☒ CoCatI
- ☒ CoCatJ
- ☒ SolvA
- ☒ SubB

Destinations

- ☒ Destination
- ☒ equation

Chemicals

Equations 806

- 1: [uL] Total Volume = 200
- 10: [Mole*Equiv.] CoCatalyst = 100 * Ca
- 2: [mg] Substrate = 0.12 * Total Mass
- 3: [Mole*Equiv.] Catalyst = 0.01 * Subst
- 4: [Mole*Equiv.] Catalyst = 0.0001 * Subst
- 5: [Mole*Equiv.] Catalyst = 0.01 * Subst
- 6: [Mole*Equiv.] Catalyst = 0.0001 * Subst
- 7: [Mole*Equiv.] CoCatalyst = 0.1 * Cata
- 8: [Mole*Equiv.] CoCatalyst = 1.0 * Cata
- 9: [Mole*Equiv.] CoCatalyst = 10 * Cata

Parameters

Design Outline

2: [mg] Substrate = 0.12 * Total Mass

SubB

SolvA

1: [uL] Total Volume = 200

CoCatE CoCatF CoCatG CoCatH CoCatI CoCatJ

802

812

813

803

801

810

815

800

FIG. 8A

840

Equation Matrixes - Cell (1, 1)

Status: Equation solving failed

	A	B	D	E	K	SubB	SolvA	CoCatE	CatD	RH	Solution
[Mole*Equiv.] CoC	0.000000	0.000000	-0.000001	0.000010	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	A 20.00000 (mg)
[mg] Substrate = 0.1	-0.120000	0.880000	-0.120000	-0.120000	-0.120000	0.000000	0.000000	0.000000	0.000000	0.000000	B 2.72739 (mg)
[uL] Total Volume =	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	1.000000	1.000000	1.000000	200.000000	D 0.00027 (mg)
[Mole*Equiv.] Catal	0.000000	-0.000000	0.000010	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	E 0.00003 (mg)
	-1.000000	0.000000	0.000000	0.000000	0.000000	0.100000	0.100000	0.100000	0.100000	0.000000	K 0.00055 (mg)
	0.000000	-1.000000	0.000000	0.000000	0.000000	0.001000	0.000000	0.000000	0.000000	0.000000	SubB 2727.39 (uL)
	0.000000	0.000000	-1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001000	0.000000	SolvA -2527.66 (uL)
	0.000000	0.000000	0.000000	-1.000000	0.000000	0.000000	0.000000	0.010000	0.000000	0.000000	CoCatE 0.00 (uL)
	0.000000	0.000000	0.000000	0.000000	-1.000000	0.000000	0.000000	0.000000	0.002000	0.000000	CatD 0.27 (uL)

OK

FIG. 8B

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

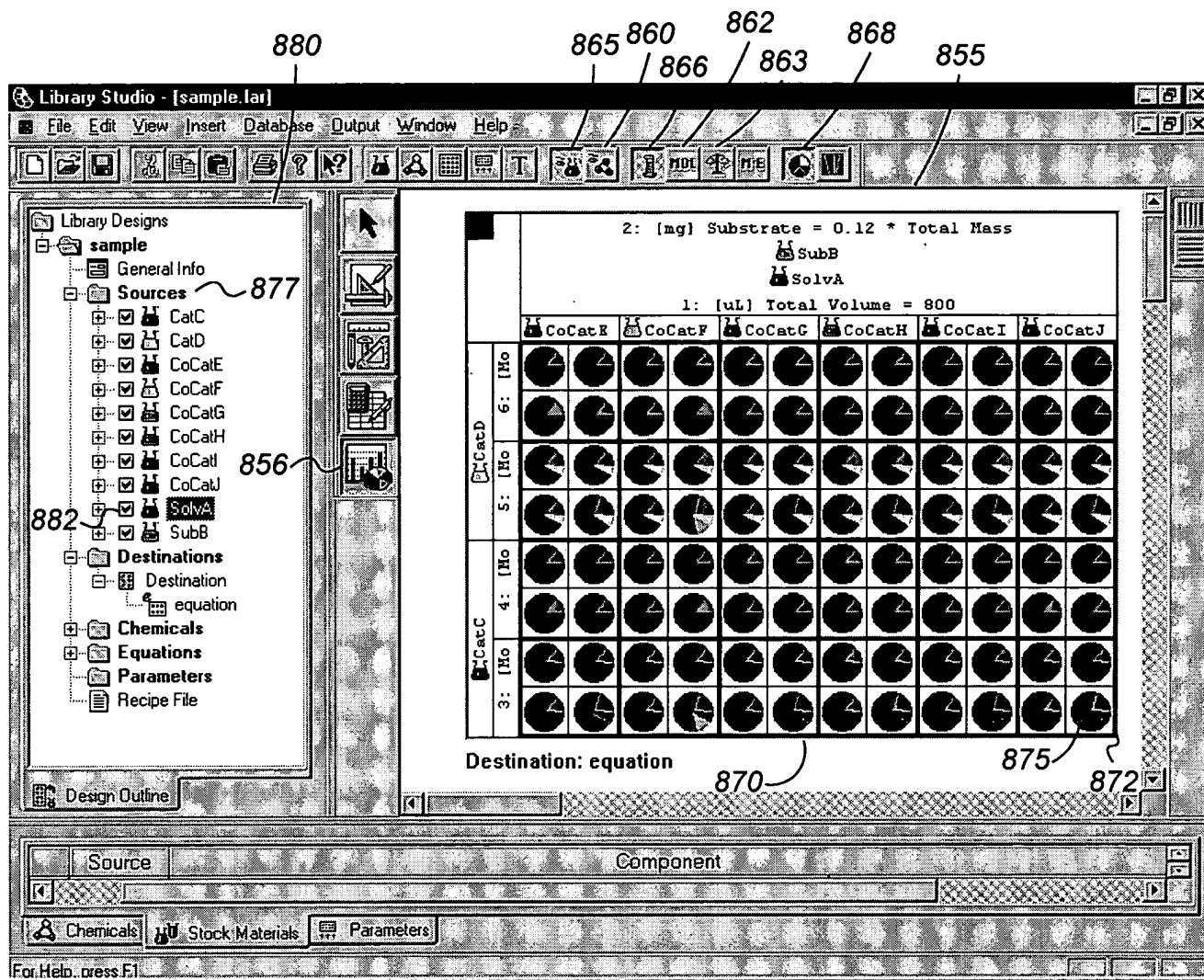


FIG. 8C

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Destination (1, 1)

Source

Name	Amount (uL)
SubB	109.1
SolvA	690.4
CoCatE	0.0
CatD	0.5

Chemicals

Name	uMole	Mole Fraction	Mass (mg)	Mass Fraction
A	3200.00000	0.98323	80.00000	0.87993
B	54.55010	0.01676	10.91002	0.12000
D	0.00546	0.00000	0.00546	0.00006
E	0.00055	0.00000	0.00027	0.00000
K	0.01091	0.00000	0.00109	0.00001

OK

885

FIG. 8D

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Parameter Property

Name: 905

Parameter Type: 910

Unit: 915

Destinations to Apply: ☒ My Destination 920

Parameter Value Variation: 925

Spatial: Rows: 930, Columns: 935

Temporal: Time Steps: 940, Time Unit: 945, Function: 950

Description:

OK 960 Cancel

900

FIG. 9A

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

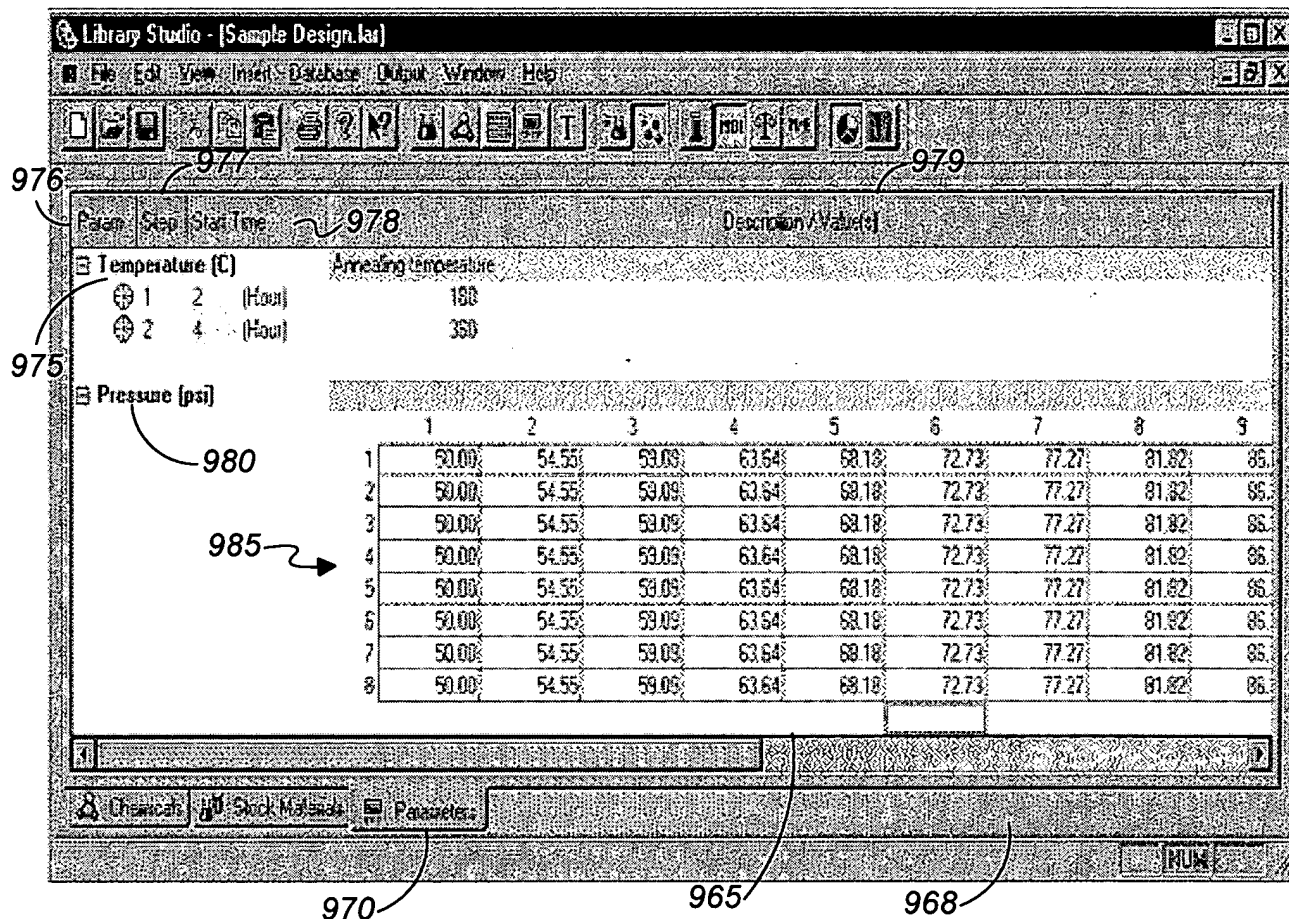


FIG. 9B

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

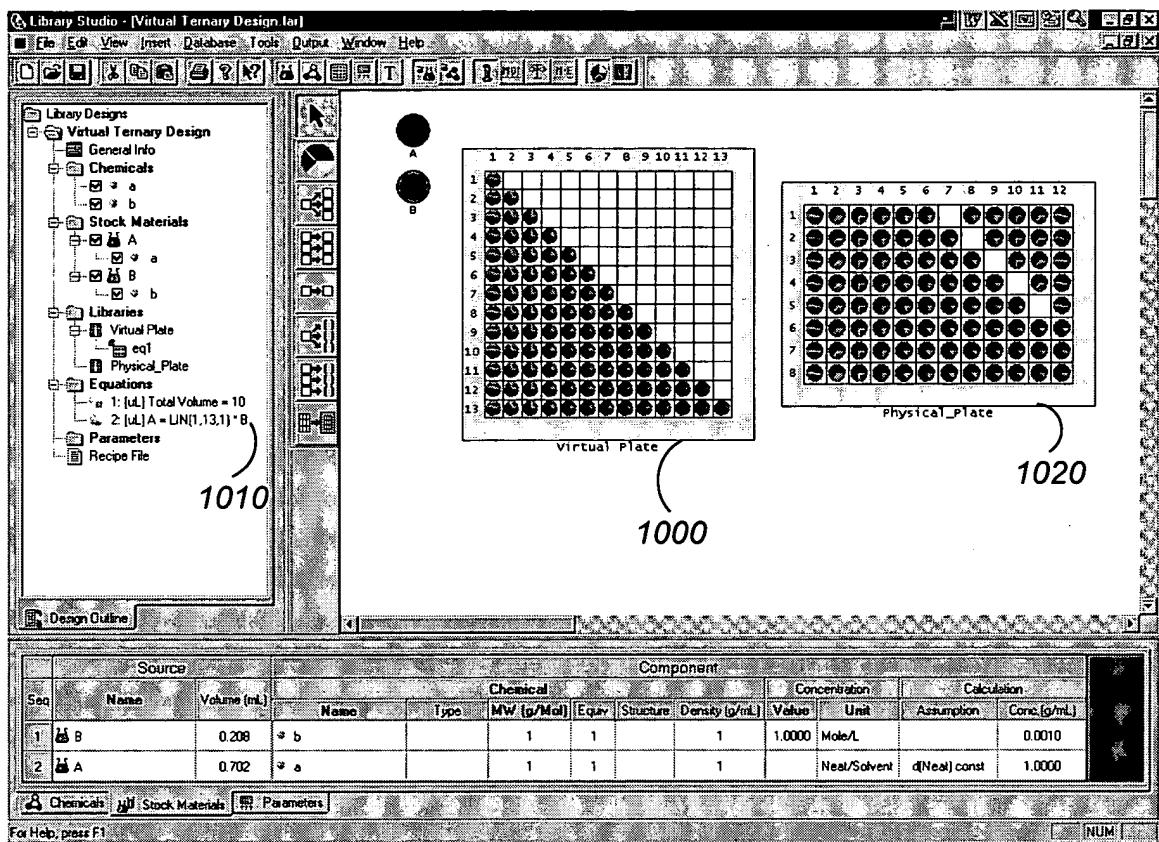


FIG. 10